Indiana's Digital Learning Trends

2017 Edition

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Indiana DEPARTMENT OF EDUCATION

Working Together for Student Success

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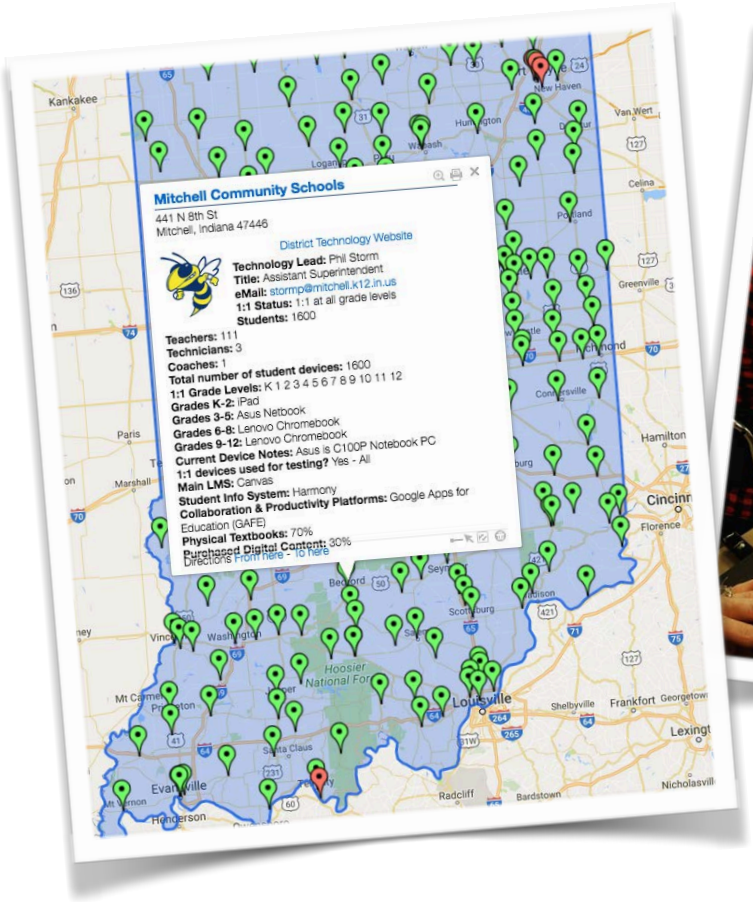


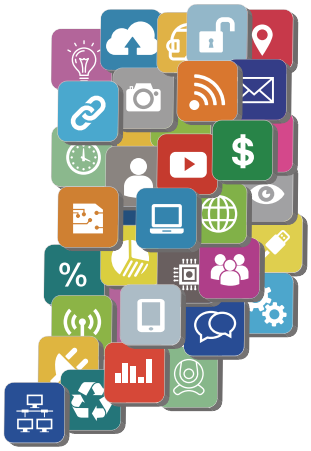
Overview

The Indiana Tech Plan is an annual survey of school technology leaders that provides precise information about technology choices being made at the district level. This new model was launched in 2016, and while it still asks leaders to look forward in their planning, it also asks for easily consumable information about what is currently in use. This data has proven useful to those at the state and district level, as well as the vendors who support this work. The survey opens each year in March, with results published in May. In addition to this report, you can find complete data for this year's Tech Plan, including maps, infographics, and raw data, on the Indiana Department of Education's website: http://www.doe.in.gov/elearning/2017-tech-plan-data

The 2017 survey represents another comprehensive data gathering from 360 of Indiana's public school districts. Of the 37 districts who did not submit a response, only one was a 'traditional' school district, the others representing charters and academies - many of which are 'districts' made up of just one small school. Participating districts serve 1,041,598 students (92% of Indiana students), and administer a total of 791,795 student devices. This represents a ratio of more than 76% of Indiana's students with regular access to a device, or a ratio of three devices for every four students across the state.

Key Findings

The 2017 Tech Plan helps us answer some important questions about the state of technology integration in Indiana schools.



Do Indiana students currently have access to online coursework?

Yes. 89% of districts report that their students have access to online courses. (page 15)

Do districts have the bandwidth they need for learning?

81% of districts meet previously established national goals. Steep growth is needed to hit new targets that support increasing digital content. (page 8)

How many school districts provide a device for every student?

125 districts are 1:1 at every grade level. 271 are 1:1 at some level. (page 5)

Where is Indiana in the transition to digital content?

On average, fully 1:1 districts estimate that digital content now makes up 61% of their content; textbooks down to 39%. (page 14)

What kinds of devices are students using now?

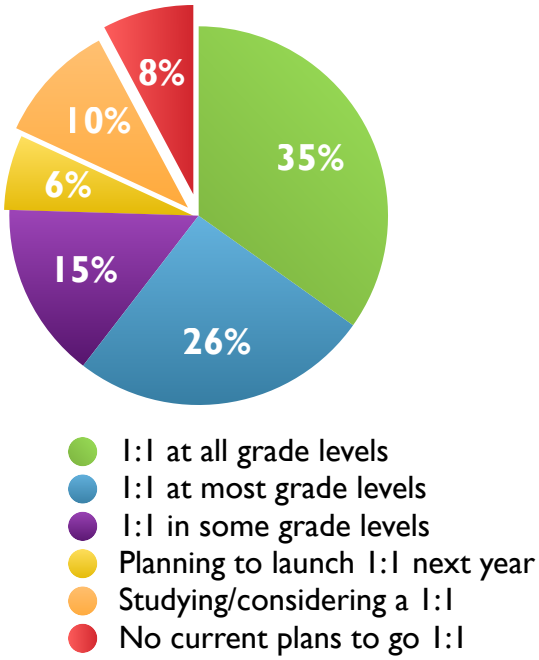
iPads continue to dominate elementary classrooms, while upper grades have seen a large surge in Chromebooks of various brands. (page 6)

Do all Indiana schools have Wi-Fi access deployed?

All 360 districts responded that they have deployed Wi-Fi in their school buildings. 348 (97%) have it in all of their buildings. (page 10)

Devices

The landscape for device use continues to grow and shift in Indiana. Each year we move closer to the goal of one connected device for every student, or a 1:1 ratio. In 2017, 35% of our districts report achieving 1:1 at all levels, K-12. That represents 125 districts, which is 31 more than last year. Adding those who have begun a 1:1, 76% of our districts are now providing this experience for students one or more grade levels. This number includes an addition of 32 districts who had no 1:1 last year. 60 districts responded that they are currently studying a move to 1:1, or have plans to launch next year, leaving only 28 of our districts with no current plans.

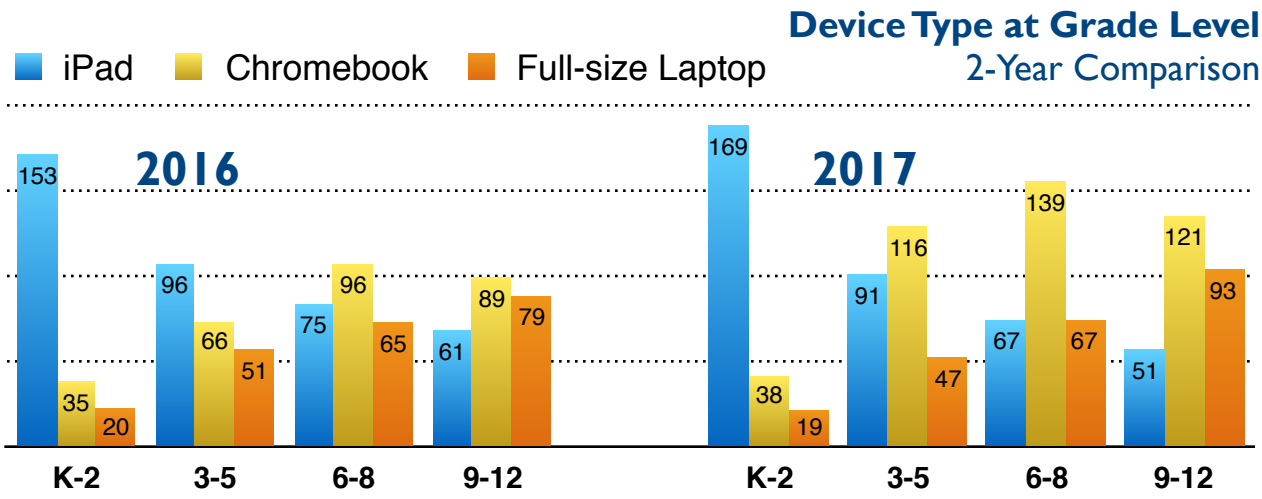


Districts continue to fund these initiatives through a number of different streams, with the vast majority leaning heavily on capital projects and textbook rental to upgrade infrastructure and purchase devices. 176 districts (nearly 50%), also use E-rate funding to support their device strategy . Common school fund loans have provided support for 96 districts, and 79 use funds from Title 1, Part A. The other top sources mentioned included grants, bonds, and foundations. Device types vary widely across grade level,

"The Tech Plan data helps us to demonstrate to our school board and community that our technology initiatives are aligned in the direction that Indiana is moving and that our big technology needs are justified."

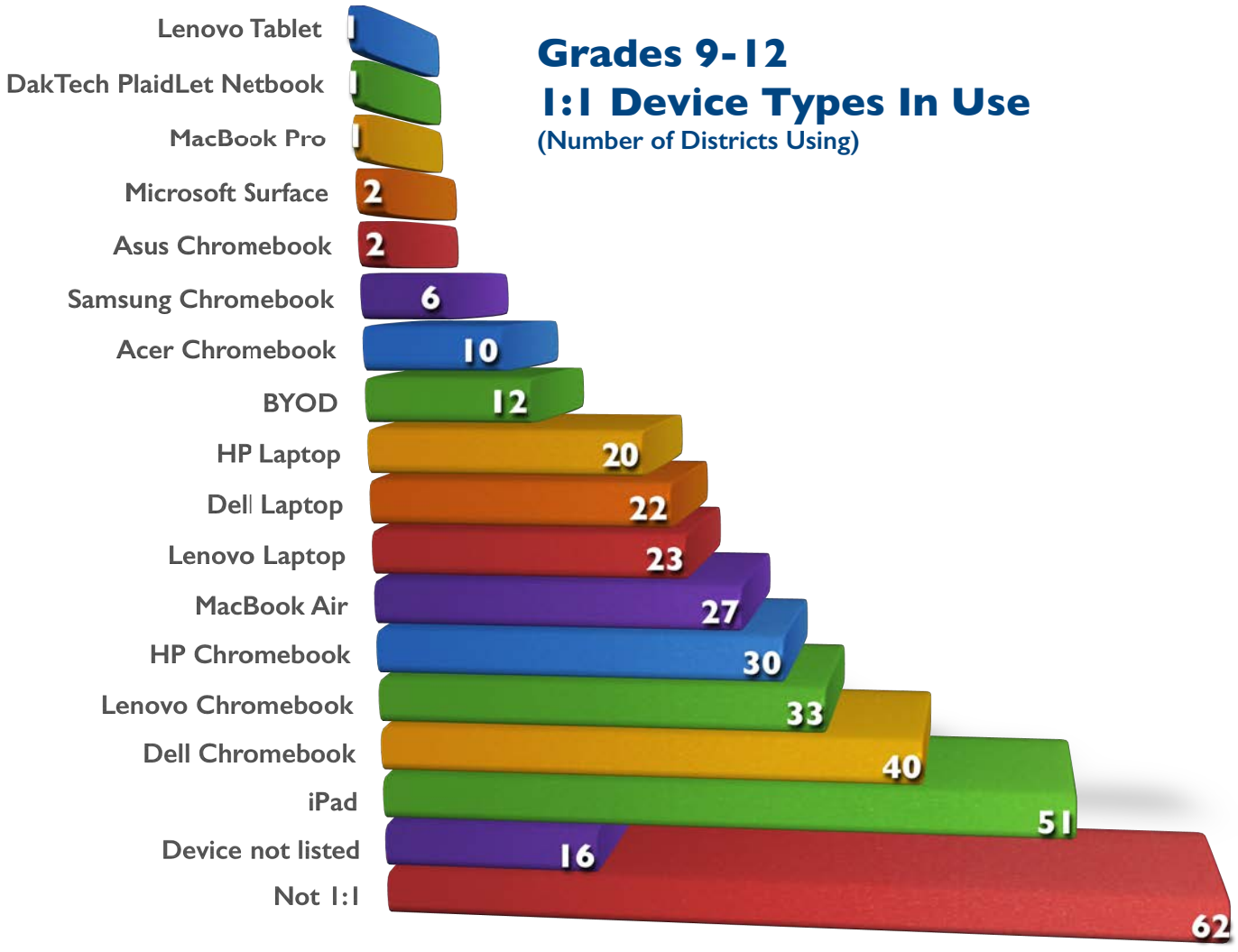
Shawn Iverson
Rush County Schools

with some trends emerging. iPad overwhelmingly remains the device of choice in primary grades, with 169 districts choosing the Apple tool K-2 in 2017. This is an increase of 16 districts while other device types remained mostly unchanged. iPad numbers are cut almost in half in grades 3-5, and further in 6-8 where the Chromebook has taken over as the device of choice. It seems that higher grades are opting for choices with a keyboard, as full-size laptops steadily increase toward 9-12 where Chromebooks take a dip and laptops increase to 93 districts.



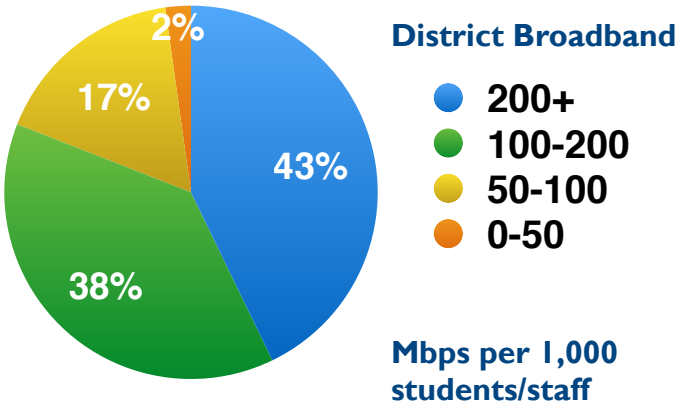
Looking at the changes from year to year, the biggest story seems to be the increase in Chromebook implementations. In 2017 we saw the number of districts using Chromebooks nearly double at 3-5. In this age bracket, there were more than 34 brand new 1:1's in 2017. There were also 10 fewer districts in the "device

not listed" category, perhaps signaling instances where more obscure devices were replaced with Chromebooks. Within the Chromebook numbers, the HP and Lenovo versions saw the most growth since 2016 with 24 and 17 new districts (respectively) at the 3-5 level.

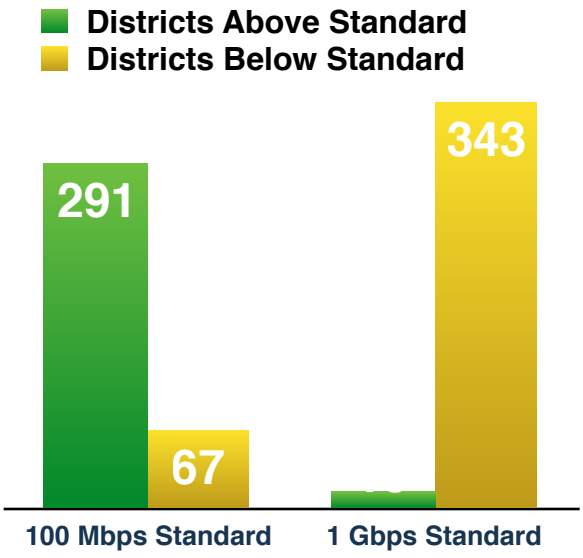


Bandwidth

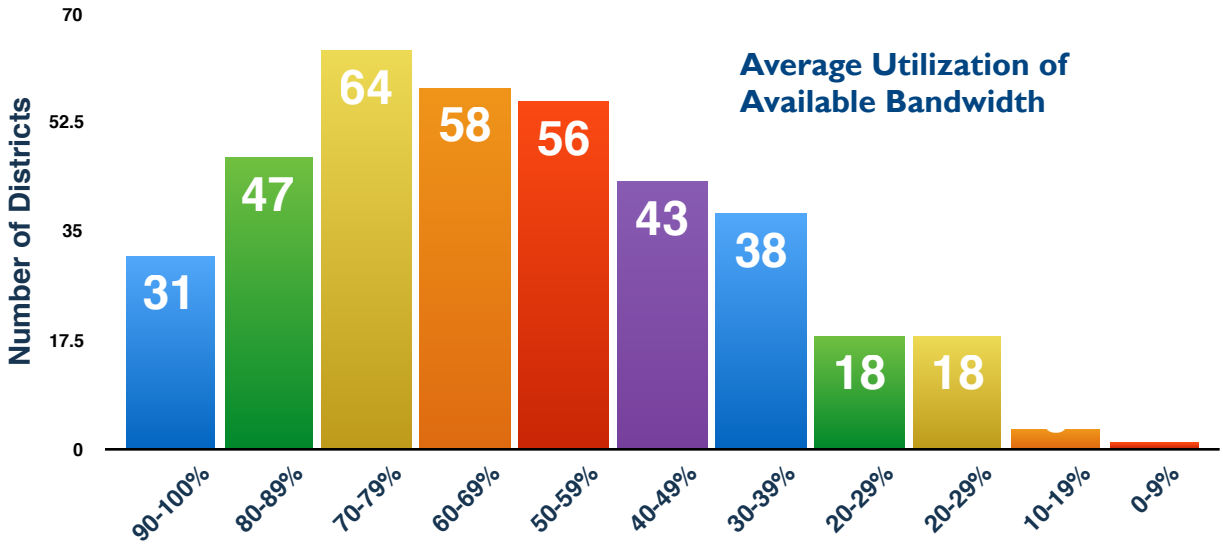
In 2016, the State Educational Technology Directors Association (SETDA) refreshed their recommendations for K-12 broadband. Previous targets recommended at least 100 Mbps per 1,000 users, and our data shows that 291 (81%) of Indiana districts have achieved this level in 2017. This is 46 more districts than last year (245 in 2016). Also, since last year the 0-50 Mbps category is down from 27 districts to only 8 in 2017. This represents significant increases in purchased broadband at all levels.



However, in The Broadband Imperative II, SETDA increases the targets for next year by a power of 10. One of the pieces driving this need is the use of cloud-based collaborative documents. Applications like Office 365 and Google Apps have been calculated to consume some of the highest rates of broadband, with download speeds around twice as high as streaming HD video. As more of our content for learning moves to these rich, digital media, the broadband needs for districts will continue to rise. For medium size districts (3,000), SETDA now suggests at least 1.0 Gbps per 1,000 users. Only 15 districts in Indiana currently meet this steep benchmark.



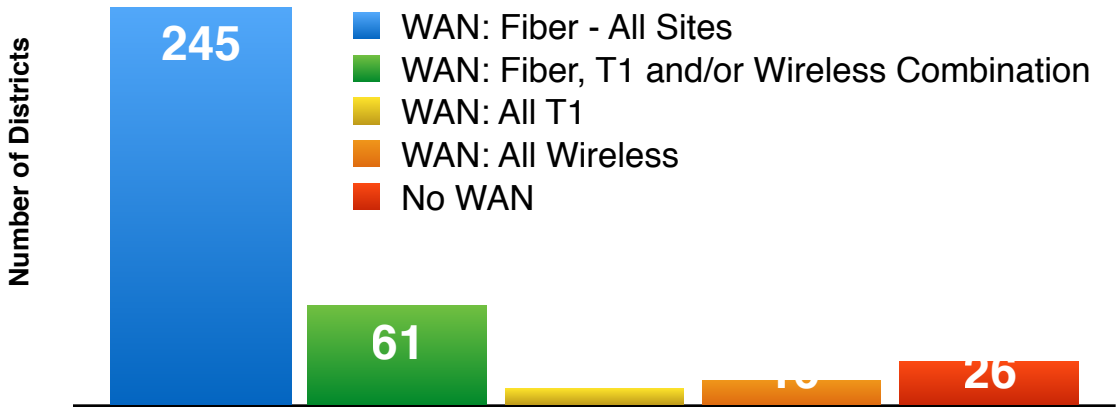
These standards are a good starting point for the conversation about how much bandwidth a district needs, but the decision must certainly take into consideration the specific needs of the district. How many grade levels have devices, and how often are they being used? How much content is digital, and what is that content's demand on bandwidth? In addition to answering these questions, districts are closely monitoring how much of their current bandwidth is being utilized on a regular basis. Their responses in the chart below show that most districts purchase enough broadband to allow some room for growth above their average usage.



Infrastructure

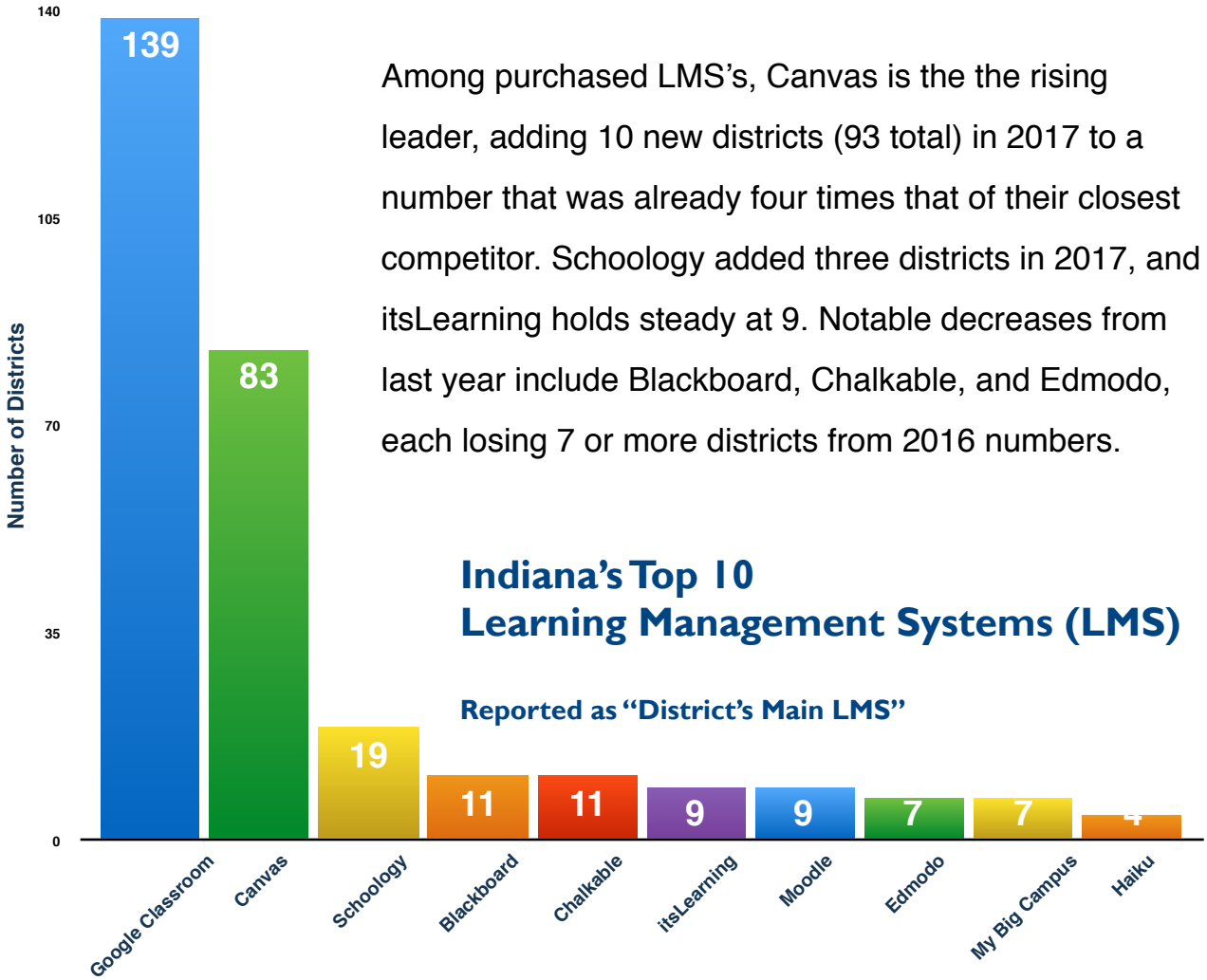
Once districts have achieved adequate bandwidth, the next concern is connecting classrooms to drive Internet access for students. Every district responding to this year's survey indicated that they have Wi-Fi access deployed in their buildings, 348 districts report this access in all of their schools. Less than half allow students to add their personal devices to school Wi-Fi.

Submitted plans for network improvement show many districts are currently in the process of upgrading old switches, cabling, and wireless access points. Several mention their work toward wireless density, adding additional access points to get closer to a ratio of one per classroom. Most districts (68%) have established a fiber wide area network (WAN) to all of their schools, while others use a combination of T1 and wireless. 26 districts report having no WAN. Of these, nearly half are single-building academies, and all have less than 1,500 students.



Platforms

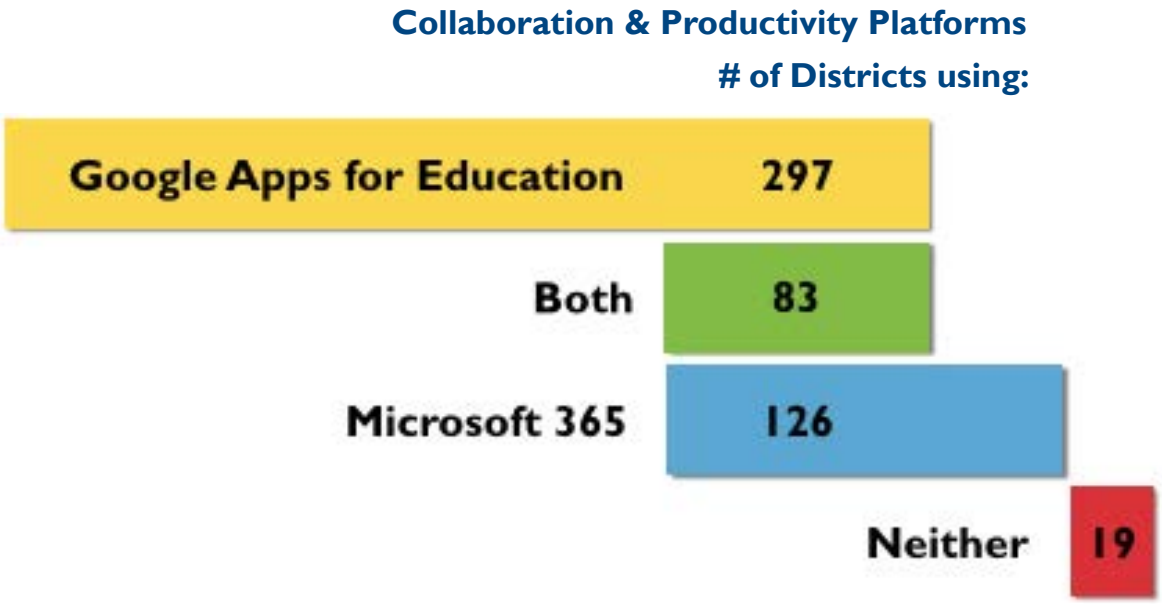
Learning management systems (LMS) are the centerpiece of digital content delivery, so this will be an important section to watch going forward. Indiana is now two years beyond the demise of My Big Campus, a content repository and LMS that was available free in the state from 2013-2015. In its absence, many districts migrated to another free option, Google Classroom. Many would debate whether Classroom is truly an LMS, including Google who refers to its application as a 'web service for schools.' Nevertheless, last year 139 districts reported Classroom as their "Main LMS," and that number grew to 156 in 2017.



Among purchased LMS's, Canvas is the the rising leader, adding 10 new districts (93 total) in 2017 to a number that was already four times that of their closest competitor. Schoology added three districts in 2017, and itsLearning holds steady at 9. Notable decreases from last year include Blackboard, Chalkable, and Edmodo, each losing 7 or more districts from 2016 numbers.

One of the new items on the 2017 survey asked about Student Information Systems (SIS). In this category Powerschool leads all others with 147 districts, followed by Harmony (82), Skyward (57), and Chalkable (20). All other SIS options registered fewer than 10 districts each.

In the realm of collaborative work and the platforms that make interaction possible, Google Apps is still the leader. More than 82% of Indiana districts are taking advantage of Google tools. More than 25 districts added Microsoft 365 this year, and the number who said they use both platforms grew by the same amount. This survey did not yet include a checkbox for Apple's iWork suite, which launched real-time collaborative tools this year. A few noted it as a write-in.

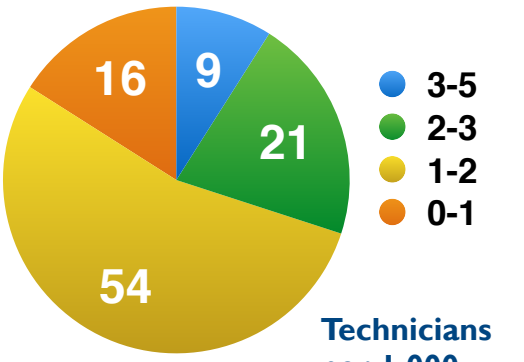


Staffing

Analyzing technology staffing in each district begins with the technology leader. Of the leaders who completed the 2017 survey, 242 indicated that their title was 'Director' (Technology and IT most common among these). 37 are listed as 'Coordinator,' and 12 have the title of 'Chief Technology Officer.' In smaller districts, we find that these leaders wear many hats. 16 are superintendents and another 7 are also principals. 26 of these leaders have completed CoSN's exam to become Certified Education Technology Leaders (CETL), and another 31 report being in the process of adding the distinction. Also popular among Indiana's leaders are the certifications from CompTIA. 34 hold the A+ certification, and others listed include (less than 10 each) Project+, Security+, Network+, and Server+.

"We used the data to help us plan what our support staff needs would be as we added more devices to our district. Thank you so much for this information. It is invaluable!"

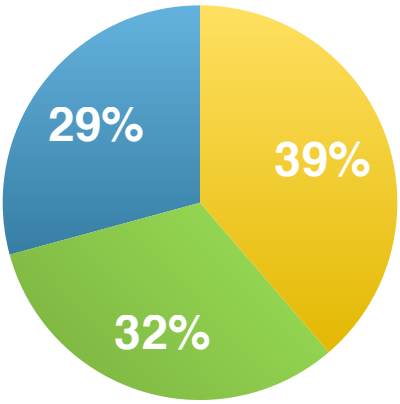
Travis Penn
Noblesville Schools



Technicians per 1,000 students/staff

The Tech Plan also gives us a sense of how districts are staffing for adequate support in technology-rich environments. For this analysis, we look only at those districts who are 1:1 K-12, and have more than 500 total users. In 2017, that group includes exactly 100 school districts. Using data from these districts, we divided staffing by their number of users to get a number useful for comparing. This year's data showed an average of 1 Tech for every 588 users, and 1 coach for every 1,433 users.

Digital Content



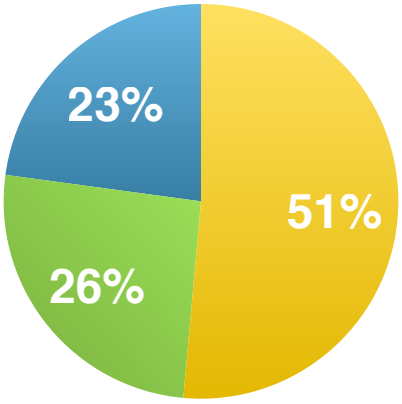
All 1:1

2017 saw very little change in the kinds of content used by districts who are 1:1 throughout. Fully digital districts average less than 40% of their content from traditional textbooks, and balance this in fairly even amounts with purchased digital content, as well as teacher curated content. There was some movement among the other two groups, likely based on the fact that 32 districts moved out of the "No 1:1" category this year. The result was that textbook use was actually higher among those who remained in that unplugged group.

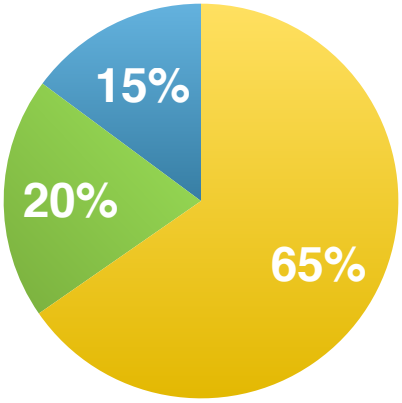
Physical Textbooks

Purchased Digital

Teacher Created/ Curated Digital Content



Partially 1:1

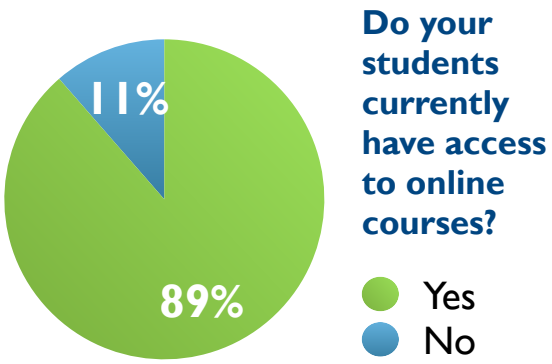


Not 1:1

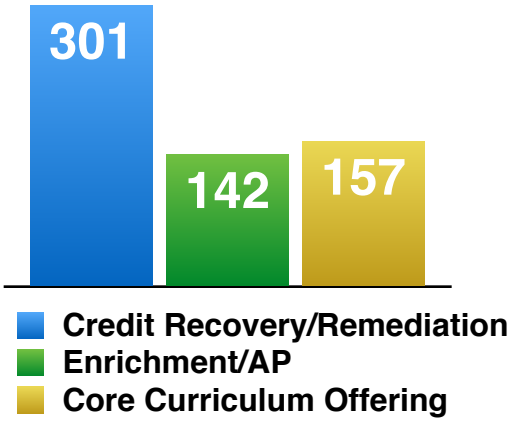
The "Partially 1:1" group saw the textbook percentage drop from 57% in 2016 to 51% in 2017. Both 1:1 groups saw teacher curated materials rise slightly over last year. Movement here is expected, given Indiana's work to support digital content curation. In 2016, Indiana was a founding member of the national #GoOpen Campaign, and also received a Library of Congress grant for teachers working with primary sources. This impacted teachers in 20 districts directly, and many more through Summer of eLearning Conferences.

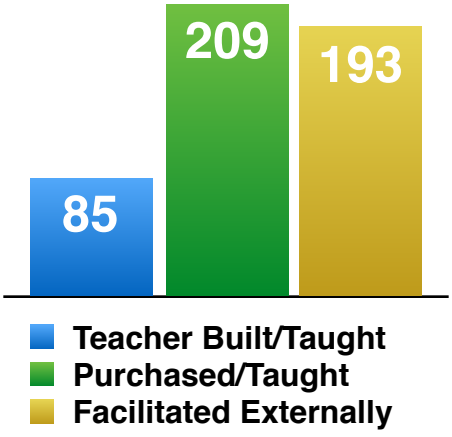
Virtual Learning

The 2017 survey marks the first year for gathering data on the virtual learning opportunities being supported in Indiana districts. In a year that saw legislation focused on increasing access to courses, 318 district leaders (89%) responded that their students currently have access to online courses. Digging into the 41 districts who responded “No” to this question, only 9 of them are traditional districts, while the other 32 are public charters.



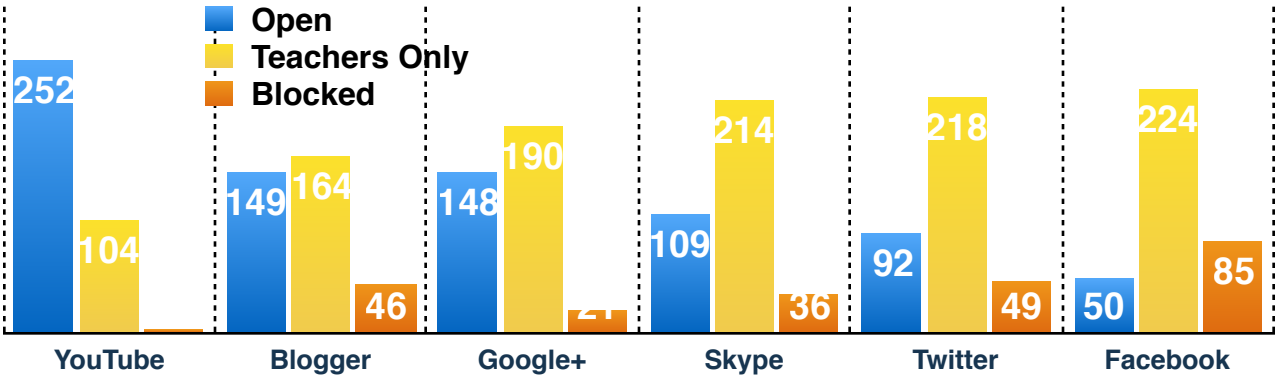
Questions about the nature of virtual courses found that content used for credit recovery or remediation is most prevalent. It was included in almost all of the responses, while districts are about half as likely to include access to courses for core curriculum or enrichment. Teacher created content is in the minority among content used for these courses; higher numbers were for purchased courses or content. Popular vendors for content purchased and taught by teachers were (in order of popularity): Edmentum, Apex Learning, Pearson GradPoint, and Compass Learning. For fully facilitated online courses, Indiana Online Academy was the most popular option with 72 districts reporting that they enroll students in IOA offerings.





Social Media

As districts spend more time working with students in digital environments, and teaching them more about good digital citizenship, we tend to see more sites open for their students to use. Among these 'middle ground' websites that can't be labeled "harmful" in terms of the Children's Internet Protection Act (CIPA), some of the more prominent social media are a good measure of just how "open" things are.



Within this group, YouTube seems to be the most open according to 2017 responses. Despite its demands on bandwidth, 252 districts find that YouTube content should be available to students and teachers alike. Many schools have turned to Facebook to communicate with parents and community, but it remains the most blocked service among this group.

> **"It helped us to figure out how we are fairing compared to other schools. It's easy for someone to say 'everyone' is doing this or that, but having hard data to look at is priceless."**
>
> **Paul Hancock**
> **Lanesville Community Schools**

The number of districts who have opened access for students has increased for five of these tools. Only Google+ seemed to lose ground by 4 districts, while the 'Open' column gained an average of 20 districts for each of the others since 2016. YouTube also showed the largest growth, open in 54 more districts than it was last year.

Technology Integration

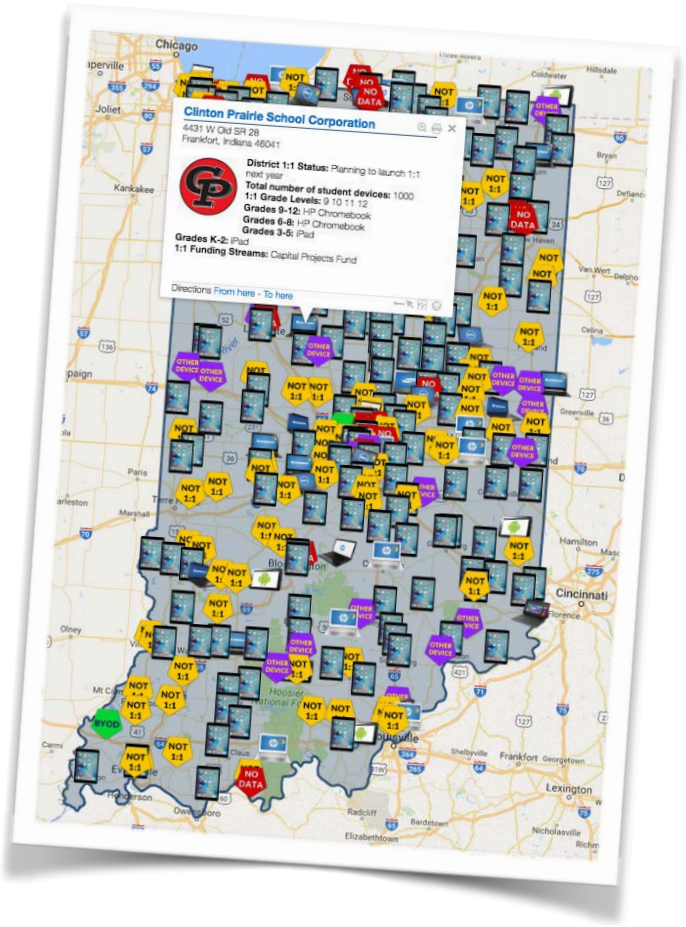
For some, the vision for technology integration doesn't get much further than how many devices they intend to add. Most Indiana districts, however, have a clear picture of the kind of learning environment they hope to achieve through technology. Their responses to the vision question speak of empowering learners, enabling communication and collaboration, preparing students for their future, and establishing student-centered learning environments. Other recurring responses mention enhancing their curriculum and allowing for student creation.

"The Tech Plan Data has completely changed how I prospect potential customers. Instead of spinning my wheels searching through individual school websites, I am able to go to the IDOE website and find exactly what I am looking for. "

Nate Holmes
National Sales Manager
AppleCrossing.com

To help their teachers and administrators achieve these goals, districts are employing a wide array of professional development initiatives. 24 districts mentioned using the SAMR Model to help them strive for more meaningful uses of technology that go beyond simple substitution. A great deal of professional development plans include sessions on the platforms themselves. More than 70 districts mention Google Apps in their PD focus, while many discuss training that involves their learning management system. 49 of these mention Canvas by name. More than 40 districts describe workshops that are focused on helping teachers curate and create new digital content to deliver to students.

Additional Information



If you would like to dig into 2017 Tech Plan data more deeply, you can find all of the information on the IDOE website: http://www.doe.in.gov/elearning/2017-tech-plan-data

There you will find maps with comprehensive information submitted by each school district, as well as device type maps like the one pictured here. Additionally, we have posted a raw data file which will provide you with the spreadsheet version of this year's survey responses. The infographics section contains all of the graphs represented in this report and several more. We encourage you to share this data; download them as graphics to share online or in a presentation. Slides are also available packaged together in an interactive PDF document.

If you have suggestions or feedback regarding the Tech Plan or the Trends Report, please take a moment to share your thoughts with us.

Photos included throughout were shared by Indiana schools on the @INeLearn Instagram account.